

WHAT IS CLAIMED IS:

1. An intraluminal catheter, comprising:  
an elongated shaft having a proximal end, a distal end, and an inner lumen extending longitudinally therethrough, the shaft including expanded UHMWPE.
2. The intraluminal catheter of claim 1, wherein the expanded UHMWPE is microporous and has a node and fibril microstructure comprising nodes interconnected by fibrils.
3. The intraluminal catheter of claim 1, wherein the shaft includes an inner liner defining the inner lumen, the inner liner including the expanded UHMWPE.
4. The intraluminal catheter of claim 3, wherein the inner liner has a thickness of about 0.0002 to about 0.0006 inch.
5. The intraluminal catheter of claim 3, wherein the inner liner has a thickness of less than about 0.0005 inch.
6. The intraluminal catheter of claim 3, wherein the inner liner has a thickness of about 0.00025 inch.

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7. The intraluminal catheter of claim 3, wherein the inner liner has a porosity of about 20 to 90 percent.

8. The intraluminal catheter of claim 3, wherein the shaft further includes a polymeric outer jacket extending over the inner liner and a reinforcing structure disposed between the polymeric outer jacket and the inner liner.

9. The intraluminal catheter of claim 8, wherein the polymeric outer jacket, reinforcing structure and inner liner have a combined thickness of about 0.004 to about 0.005 inch.

10. The intraluminal catheter of claim 8, wherein the inner liner is impregnated with a polymer which is compatible with the polymeric outer jacket.

11. The intraluminal catheter of claim 10, wherein the impregnated polymer in the inner liner is fusion bonded to the polymeric outer jacket.

12. The intraluminal catheter of claim 10, wherein the impregnated polymer in the inner liner and the polymeric outer jacket are formed of PEBAX.

13. The intraluminal catheter of claim 12, wherein the impregnated polymer in the inner liner is fusion bonded to the polymeric outer jacket.

14. The intraluminal catheter of claim 9, wherein the inner liner is secured to the polymeric outer jacket with a tie layer of a compatibilizing material.

15. The intraluminal catheter of claim 1, wherein the shaft includes a lubricious exterior coating including the expanded UHMWPE.

16. A guiding catheter, comprising:

an elongated shaft having a proximal end, a distal end, and an inner lumen extending longitudinally therethrough; and

an inner liner disposed within and defining the inner lumen, the inner liner  
5 including expanded UHMWPE and having a thickness of about 0.00025 to about 0.0005 inch.

17. A method for manufacturing an intraluminal catheter with an inner liner including expanded UHMWPE, comprising:

providing a polymeric outer jacket;

providing a tubular inner liner including expanded UHMWPE;

5 disposing the tubular inner liner within the polymer outer jacket; and

bonding the tubular inner liner to the polymeric outer jacket.

18. The method of claim 17, wherein bonding the inner liner to the polymeric outer jacket further comprises:

impregnating the inner liner with a polymer which is compatible with the polymeric outer jacket; and

5 heat fusing the impregnated polymer in the inner liner to the polymeric outer jacket.

19. The method of claim 17, wherein bonding the inner liner to the polymeric outer jacket further comprises:

applying a compatibilizing material between the inner liner and polymeric outer jacket to act as a tie layer; and

5 heat fusing the compatibilizing material to the inner liner and the polymeric outer jacket.

20. An intraluminal catheter, comprising:

an elongated shaft having a proximal end, a distal end, and an inner lumen extending longitudinally therethrough, wherein the shaft includes varying stiffness along its length;

5 an inner liner disposed within the inner lumen, the inner liner including expanded UHMWPE; and

means for securing the inner liner to the inner lumen disposed therebetween.

21. The intraluminal catheter of claim 20, wherein a reinforcing structure is disposed between the shaft and the inner liner, and wherein the reinforcing structure includes at least one of a weave, braid, and winding of a material selected from the group consisting of stainless steel, nickel-titanium, aramid, nylon, or polyester.

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